Special Issue

Integrated Approaches to Rockfall Assessment: Bridging Geology and Engineering Perspectives

Message from the Guest Editors

The Special Issue aims to explore the common ground between geological and engineering approaches in rockfall assessment. Rockfall is a dynamic and complex natural phenomenon driven by geological, geomorphological, and mechanical factors. As one of the most common geohazards in mountainous regions, rockfalls are increasingly affected by climate change, resulting in more frequent and intense events. This Special Issue will cover advancements in: (a) susceptibility, hazard, and risk frameworks incorporating temporal and spatial uncertainties; (b) identification and evaluation of triggering mechanisms, such as precipitation, earthquakes, and climate change effects; (c) trajectory modelling—from the mechanical response at impact to sophisticated physical-based engines; (d) mitigation technologies, such as rockfall barriers and early-warning systems; and (e) construction techniques and design practices. Furthermore, the issue will highlight the role of recent technologies, such as remote sensing, LiDAR, UAV, advanced simulation methods, and AI approaches, in improving data acquisition and analysis.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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